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CE08159R-Luz et al.

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AUTOMATIC GAIN CONTROL WITH DIGITAL FILTERING FOR RADIO-FREQUENCY COMMUNICATIONS SYSTEMS

ABSTRACT OF THE DISCLOSURE

5

An automatic gain control includes a digital lowpass filter for filtering a series of digital samples generated by an analog-to-digital converter to generate a lowpass filtered digital sample series; a power averager coupled to the digital lowpass filter for calculating an average power of the lowpass filtered digital sample series; and a lookup table coupled to the power averager for setting a selectable gain of an amplifier coupled to the analog-to-digital converter as a function of the average power.